

WEINTEK LABS., INC.

Trend Display Y Scale

Demo Project

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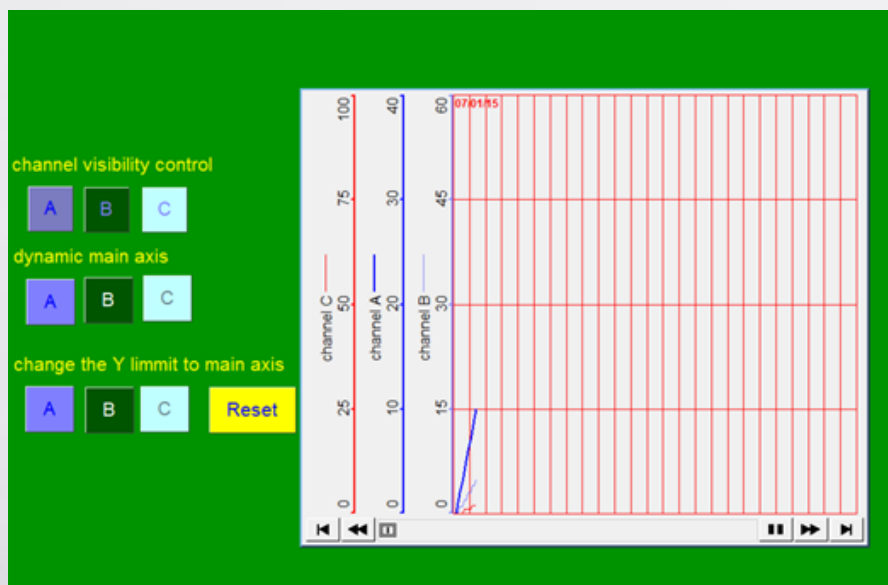
1. Overview and Operation

Overview

This demo project introduces how to use Trend Display Y-axis to set the visibility of each channel, and furthermore, to dynamically change the main axis and the limits on Y scale.

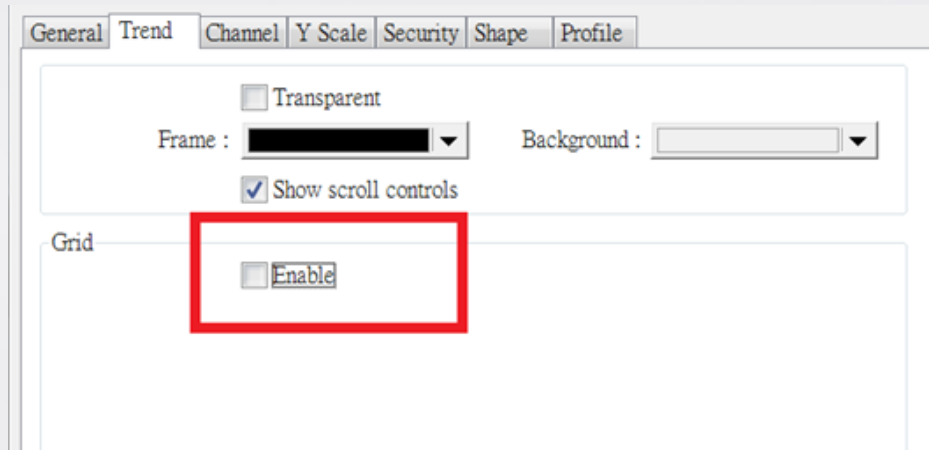
Operation

Tap the toggle switches on the left side to change the main channel, hide or show each channel and set the range of different channels.

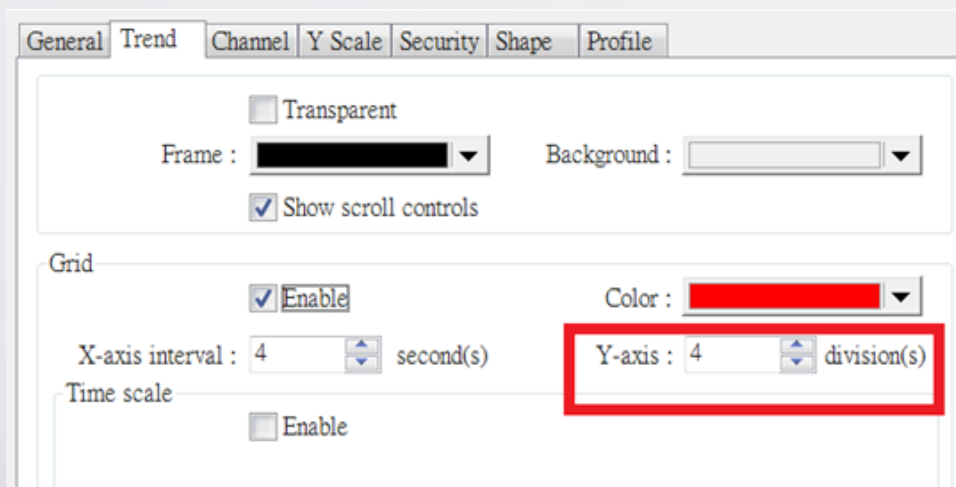


2. Setting up the Screen

Step 1. Enable the Grid function to use the Y-scale.

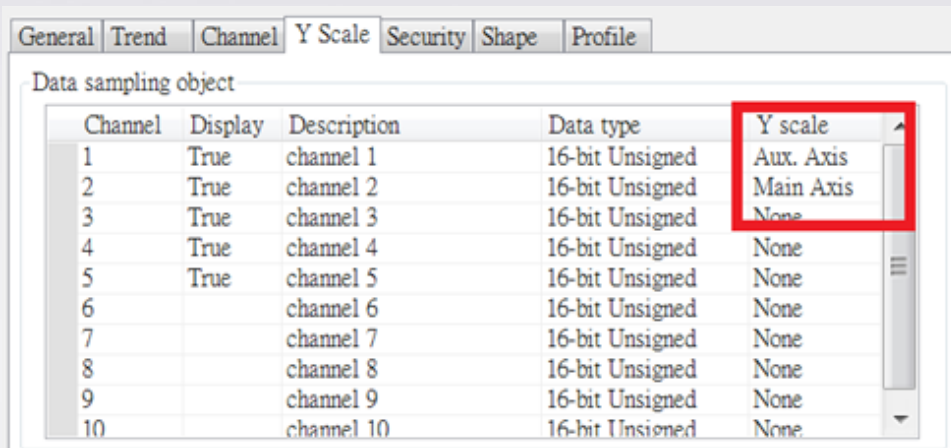


Step 2. Set the Y-axis division.



Trend Display Y Scale

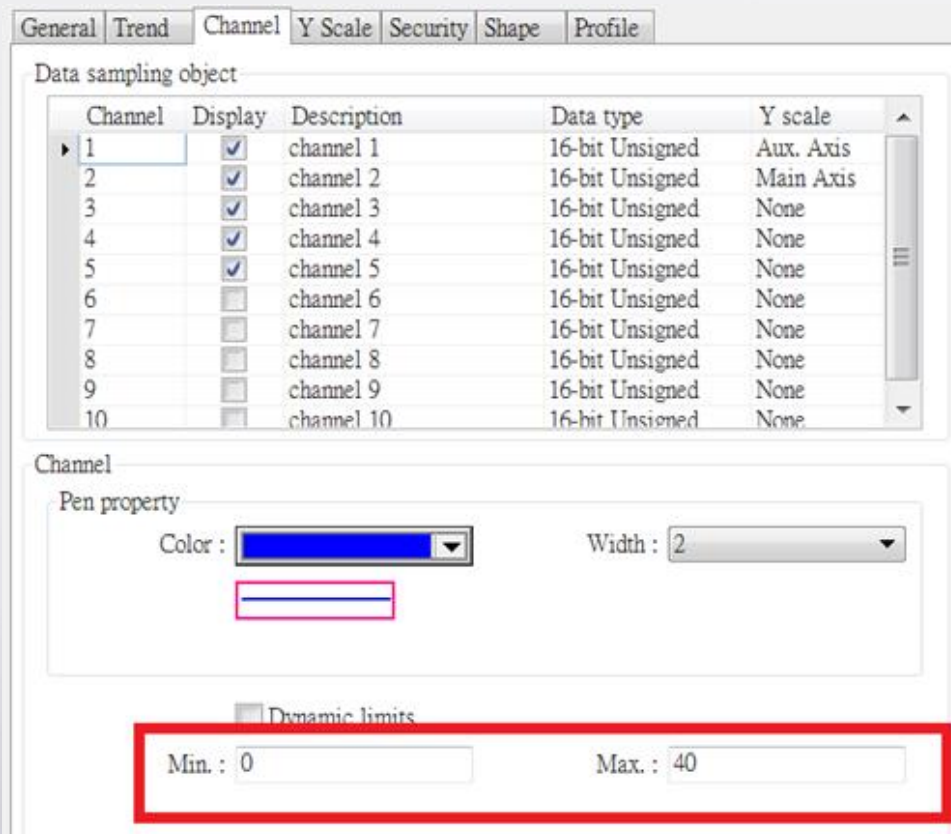
Step 3. Set each Y-axis as Main Axis or Aux. Axis



The screenshot shows the 'Y Scale' tab in a configuration window. It contains a table with 5 columns: Channel, Display, Description, Data type, and Y scale. The 'Y scale' column is highlighted with a red box, showing options: Aux. Axis, Main Axis, and None. The table lists 10 channels, with channels 1-5 having 'True' in the 'Display' column and channels 6-10 having an empty 'Display' column.

Channel	Display	Description	Data type	Y scale
1	True	channel 1	16-bit Unsigned	Aux. Axis
2	True	channel 2	16-bit Unsigned	Main Axis
3	True	channel 3	16-bit Unsigned	None
4	True	channel 4	16-bit Unsigned	None
5	True	channel 5	16-bit Unsigned	None
6		channel 6	16-bit Unsigned	None
7		channel 7	16-bit Unsigned	None
8		channel 8	16-bit Unsigned	None
9		channel 9	16-bit Unsigned	None
10		channel 10	16-bit Unsigned	None

Step 4. The axis reference's up and low limits are set at each channel.



The screenshot shows the 'Y Scale' tab with the same table as in Step 3. Below the table, there is a 'Channel' section with 'Pen property' settings: 'Color' (blue) and 'Width' (2). A red box highlights the 'Dynamic limits' section, which includes 'Min.' (0) and 'Max.' (40) input fields.

Channel	Display	Description	Data type	Y scale
1	<input checked="" type="checkbox"/>	channel 1	16-bit Unsigned	Aux. Axis
2	<input checked="" type="checkbox"/>	channel 2	16-bit Unsigned	Main Axis
3	<input checked="" type="checkbox"/>	channel 3	16-bit Unsigned	None
4	<input checked="" type="checkbox"/>	channel 4	16-bit Unsigned	None
5	<input checked="" type="checkbox"/>	channel 5	16-bit Unsigned	None
6	<input type="checkbox"/>	channel 6	16-bit Unsigned	None
7	<input type="checkbox"/>	channel 7	16-bit Unsigned	None
8	<input type="checkbox"/>	channel 8	16-bit Unsigned	None
9	<input type="checkbox"/>	channel 9	16-bit Unsigned	None
10	<input type="checkbox"/>	channel 10	16-bit Unsigned	None

Channel

Pen property

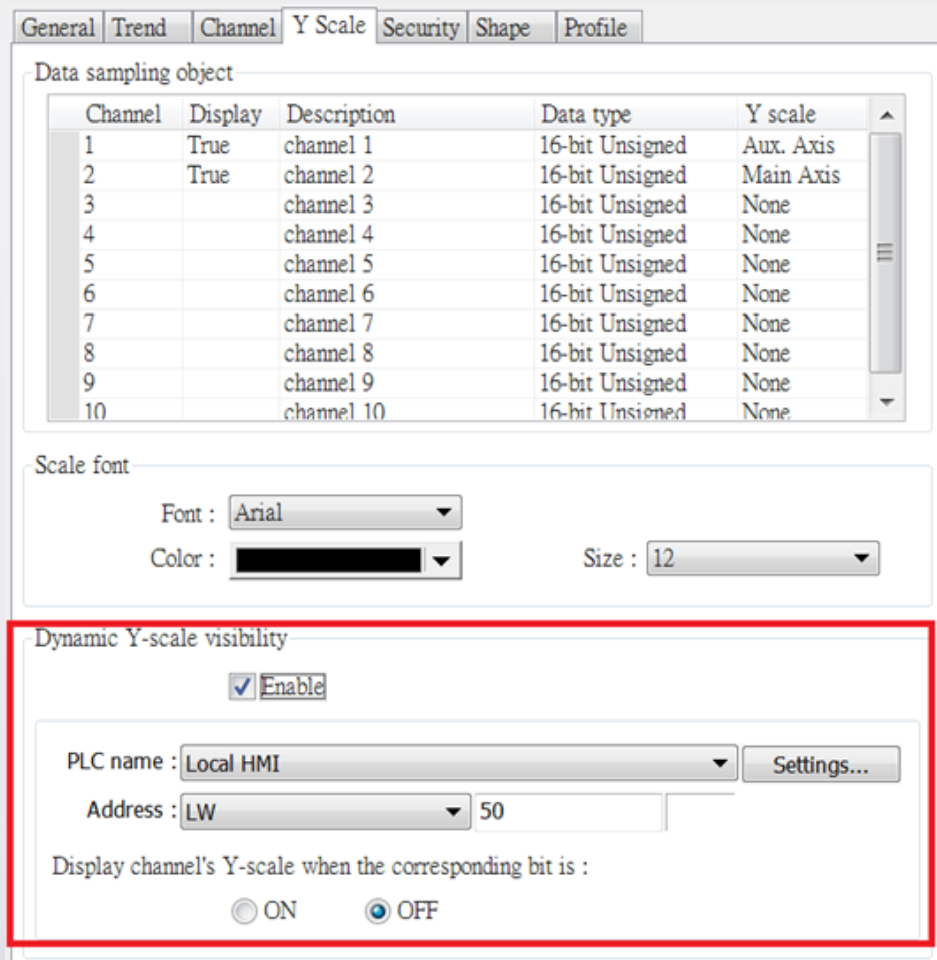
Color : Width :

☐ Dynamic limits

Min. : Max. :

Trend Display Y Scale

Step 5. In the Dynamic Y-scale Visibility group box, set the Y-scale to be shown or not. If the control address is LW-50, then the first axis is controlled by LW_Bit 5000, the second axis is controlled by LW_Bit 5001... and so on.



Channel	Display	Description	Data type	Y scale
1	True	channel 1	16-bit Unsigned	Aux. Axis
2	True	channel 2	16-bit Unsigned	Main Axis
3		channel 3	16-bit Unsigned	None
4		channel 4	16-bit Unsigned	None
5		channel 5	16-bit Unsigned	None
6		channel 6	16-bit Unsigned	None
7		channel 7	16-bit Unsigned	None
8		channel 8	16-bit Unsigned	None
9		channel 9	16-bit Unsigned	None
10		channel 10	16-bit Unsigned	None

Scale font

Font : Arial

Color :

Size : 12

Dynamic Y-scale visibility

☒ Enable

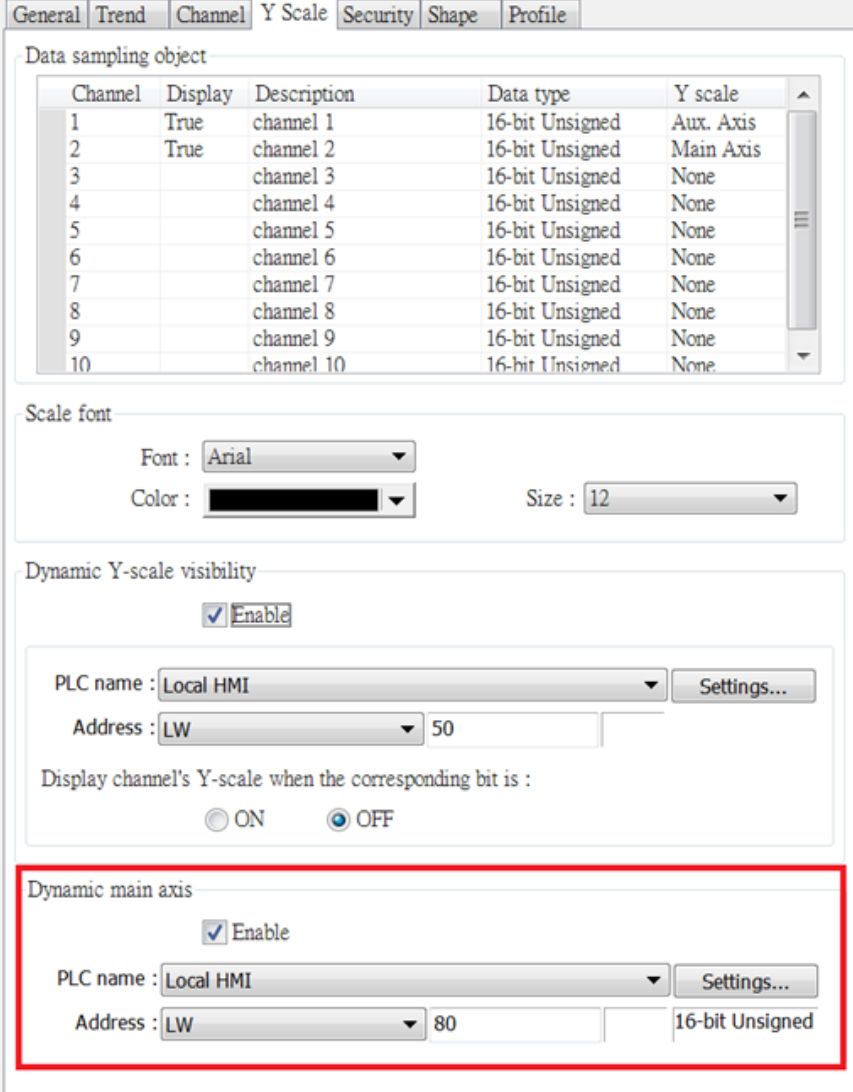
PLC name : Local HMI

Address : LW 50

Display channel's Y-scale when the corresponding bit is :

☐ ON ☒ OFF

Step 6. The dynamic main axis allows the user to change the main axis. If the LW-80 is written into 1, the main axis will be channel 1, if it's set into 2, the main axis will be channel 2...and so on.



General Trend Channel **Y Scale** Security Shape Profile

Data sampling object

Channel	Display	Description	Data type	Y scale
1	True	channel 1	16-bit Unsigned	Aux. Axis
2	True	channel 2	16-bit Unsigned	Main Axis
3		channel 3	16-bit Unsigned	None
4		channel 4	16-bit Unsigned	None
5		channel 5	16-bit Unsigned	None
6		channel 6	16-bit Unsigned	None
7		channel 7	16-bit Unsigned	None
8		channel 8	16-bit Unsigned	None
9		channel 9	16-bit Unsigned	None
10		channel 10	16-bit Unsigned	None

Scale font

Font : Arial
Color :
Size : 12

Dynamic Y-scale visibility

☒ Enable

PLC name : Local HMI
Address : LW 50
Display channel's Y-scale when the corresponding bit is :
☐ ON ☒ OFF

Dynamic main axis

☒ Enable

PLC name : Local HMI
Address : LW 80
16-bit Unsigned

Step 7. Use [Write address] to write the constant value and change the maximum and minimum limits of different channels. Use LW-0 and LW-1 to control the minimum and the maximum limits of Channel 1. Use LW-2 and LW-3 to control the minimum and the maximum limits of Channel 2. And so on...

General Security Shape Label Profile

Comment :

Write address

PLC name : Local HMI

Address : LW 16-bit Unsigned

☒ Write after button is released

Notification

☐ Enable

Attribute

Set Style : Write constant value

Set value :

3. Addresses

The addresses of objects used in this demonstration are listed below.

Object	Address	Object ID	Description
Window 10			
Trend Display	LW-50	TD_0	Controls Dynamic Y-scale visibility.
Trend Display	LW-80	TD_0	Displays trend curve.
Toggle Switch	LW_Bit 5000~ LW_Bit 5001	TS_0~ TS_2	Controls Dynamic Y-scale visibility.
Set Word	LW-80	SW_3~SW_5 SW_18~20	Selects the displayed trend curve.
Set Word	LW-0~LW-5	SW_7~SW_17 SW_21~SW_23	Sets the minimum and maximum value of each channel.